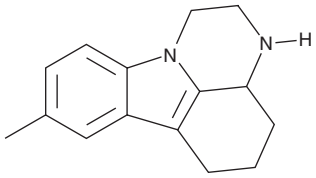
PRODUCT INFORMATION

Pirlindole

Item No. 22060

CAS Registry No.:	60762-57-4
Formal Name:	2,3,3a,4,5,6-hexahydro-8-methyl-1H-pyrazino[3,2,1-jk]carbazole
MF:	$C_{15}H_{18}N_2$
FW:	226.3
Purity:	≥98%
UV/Vis.:	λ_{max}: 229, 275 nm
Supplied as:	A crystalline solid
Storage:	-20°C
Stability:	≥4 years



Information represents the product specifications. Batch specific analytical results are provided on each certificate of analysis.

Laboratory Procedures

Pirlindole is supplied as a crystalline solid. A stock solution may be made by dissolving the pirlindole in the solvent of choice. Pirlindole is soluble in organic solvents such as DMSO and dimethyl formamide, which should be purged with an inert gas. The solubility of pirlindole in these solvents is approximately 5 and 1 mg/ml, respectively.

Description

Pirlindole is a selective and reversible monoamine oxidase A (MAO-A) inhibitor (IC_{50}s = 250 and 34.2 nM for rat brain and heart MAO-A, respectively).[1] It is selective for MAO-A over MAO-B (K_is = 52,100 and 59,900 nM, for rat brain and heart MAO-B, respectively). In rats, it reverses the depressive-like effects induced by chronic mild stress (CMS), increases proliferation of hippocampal neural progenitor cells, and reverses dendritic atrophy in granule neurons.[2] Pirlindole is also an inhibitor of enterovirus-D68 and coxsackievirus B3 (CV-B3), inhibiting the genome replication phase of CV-B3 infection with an EC_{50} value of 7.7 µM independent of MAO-A activity.[3]

References

1. Bruhwyler, J., Liégeois, J.F., and Géczy, J. Pirlindole: A selective reversible inhibitor of monoamine oxidase A. A review of its preclinical properties. *Pharmacol. Res.* **36(1)**, 23-33 (1997).
2. Morais, M., Santos, P.A., Mateus-Pinheiro, A., *et al.* The effects of chronic stress on hippocampal adult neurogenesis and dendritic plasticity are reversed by selective MAO-A inhibition. *J. Psychopharmacol.* **28(12)**, 1178-1183 (2014).
3. Ulferts, R., de Boer, S.M., van der Linden, L., *et al.* Screening of a library of FDA-approved drugs identifies several enterovirus replication inhibitors that target viral protein 2C. *Antimicrob. Agents Chemother.* **60(5)**, 2627-2638 (2016).

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